

What is claimed is:

1. A server-load-balancing program which is executed by a computer and makes said computer perform a process for establishing a permanent connection between the computer and a server in advance, and requesting the server to execute a processing request received from a client, by using the permanent connection, said process comprises the steps of:

10 (a) storing history information indicating conditions of use of at least one permanent connection in each of a plurality of first time intervals into which each of at least one preceding period is divided;

(b) determining an optimum value of the number of at least one permanent connection to be established in each of a plurality of second time intervals into which a coming period is divided, based on said history information, where the plurality of second time intervals correspond to the plurality of first time intervals, respectively; and

20 (c) establishing between said computer and said server said at least one permanent connection in each of said plurality of second time intervals in the coming period so that the number of the at least one permanent connection in each of the plurality of second time intervals is equal to said optimum value.

2. The server-load-balancing program according to claim 1, wherein said optimum value is determined based on a statistical analysis of said history information for each of the plurality of first time intervals in a predetermined number of preceding periods.

3. The server-load-balancing program according to claim 1, wherein said history information contains a maximum value of numbers of permanent connections required during each of said plurality of first time intervals in said at least one preceding period.

4. The server-load-balancing program according to claim 3, wherein said maximum value of the necessary numbers of permanent connections is a maximum value of a sum of the number of at least one used permanent connection and the number of at least one processing request which waits for at least one permanent connection to become available during each of said plurality of first time intervals in said at least one preceding period.

5. The server-load-balancing program according to claim 3, wherein said optimum value in each of the plurality of second time intervals is an average of said maximum value of necessary numbers obtained in time intervals, corresponding to said each of the plurality of second time intervals, in a predetermined number of

preceding periods.

6. A server-load-balancing method for establishing a permanent connection between a server-load-balancing apparatus and a server in advance, and requesting the server to execute a processing request received from a client, by using the permanent connection, comprising the steps of:

(a) storing history information indicating conditions of use of at least one permanent connection in each of a plurality of first time intervals into which each of at least one preceding period is divided;

(b) determining an optimum value of the number of at least one permanent connection to be established in each of a plurality of second time intervals into which a coming period is divided, based on said history information, where the plurality of second time intervals correspond to the plurality of first time intervals, respectively; and

(c) establishing between said server-load-balancing apparatus and said server said at least one permanent connection in each of said plurality of second time intervals in the coming period so that the number of the at least one permanent connection in each of the plurality of second time intervals is equal to said optimum value.

7. A server-load-balancing apparatus for establishing a permanent connection to a server in advance, and requesting the server to execute a processing request received from a client, by using the permanent connection,
5 said server-load-balancing apparatus comprises:

a history storing unit which stores history information indicating conditions of use of at least one permanent connection in each of a plurality of first time intervals into which each of at least one preceding period
10 is divided;

an optimum-number determination unit which determines an optimum value of the number of at least one permanent connection to be established in each of a plurality of second time intervals into which a coming
15 period is divided, based on said history information, where the plurality of second time intervals correspond to the plurality of first time intervals, respectively; and

a permanent-connection establishment unit which establishes between said server-load-balancing apparatus
20 and said server said at least one permanent connection in each of said plurality of second time intervals in the coming period so that the number of the at least one permanent connection in each of the plurality of second time intervals is equal to said optimum value.

25

8. A computer-readable recording medium storing a server-load-balancing program which is executed by a

computer and makes said computer perform a process for establishing a permanent connection between the computer and a server in advance, and requesting the server to execute a processing request received from a client, by
5 using the permanent connection, said process comprises the steps of:

(a) storing history information indicating conditions of use of at least one permanent connection in each of a plurality of first time intervals into which
10 each of at least one preceding period is divided;

(b) determining an optimum value of the number of at least one permanent connection to be established in each of a plurality of second time intervals into which a coming period is divided, based on said history
15 information, where the plurality of second time intervals correspond to the plurality of first time intervals, respectively; and

(c) establishing between said computer and said server said at least one permanent connection in each of
20 said plurality of second time intervals in the coming period so that the number of the at least one permanent connection in each of the plurality of second time intervals is equal to said optimum value.